

applying a substrate layer to said foam layer, said substrate layer having a plurality of scores aligning with the deployment region.

37. [Previously Presented] The method as in Claim 36, wherein said substrate layer is formed by an injection molding process.

38. [Previously Presented] The method as in Claim 33, wherein a portion of the scoring device is heated prior to the scoring of the inner surface.

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REMARKS

Claims 12-18 and 23-38 are pending in the present application and stand rejected thereto. Claims 12, 32, and 34 have been amended while claims 14 and 33 has been canceled, leaving claims 12, 13, 15-32, and 34-38 for consideration upon entry of this amendment. Support for the amendments can be found at least on pages 7, 8, and 10 as well as Figures 3 and 5 of the originally filed application. No new matter has been added.

temperature of the female vacuum forming tool high enough to form the outer surface against the female vacuum forming tool, and forming a deployment region in the inner surface of the instrument panel cover by contacting only the inner surface with at least one scoring device after initiation of the formation of the instrument panel cover creating at least one score therein at or near the elevated temperature from the female vacuum forming tool when said at least one scoring device contacts the instrument panel cover, but prior to the cooling thereof, the at least one score defining the deployment region and providing a weakened tear pattern in the inner surface so that deployment of an air bag cushion causes the deployment region to open along the at least one score for deployment of the air bag cushion, as in amended independent claim 12 and similarly claimed in amended independent claim 34. Thus, independent claims 12 and 34, including claims depending therefrom, i.e., 13, 15-18, 23-32, and 35-38, define over JP 4-126222.

Claims 12, 13, 15, 16, 17, 18, 23, 24, 25, 26, 28, and 30 stand rejected under 35 U.S.C. §102(b) as being anticipated by anticipated by Chadwick (USPN 5,256,354). Applicants respectfully traverse.

The Examiner alleges that Chadwick teaches the claimed process as evident by col. 3, lns 1-11 and 45-50; col. 4, ln 61-col. 5, ln 4; and figs 1-7.

It is respectfully submitted that Chadwick more accurately discloses “[a] method for forming a hidden tear seam in the cover for a safety air bag assembly comprises the steps of filling a heated open mold with liquid plastisol or dry powder comprised of polyvinyl materials; forming a gel layer of polyvinyl chloride material on the open heated thin metal mold; dumping excess polyvinyl liquid plastisol chloride material from the gel layer; fusing the gel layer; stamping a tear seam in a fused layer while it is still plastic by providing an anvil having a surface thereon of a first predetermined area and including an embossment thereon extending outwardly of said first predetermined area and stamping the tear seam by directing the embossment into the fused layer until the surface engages the fused layer and wherein the first predetermined area is sized to produce a reaction force on the anvil to determine the depth of penetration of the embossment and thereafter finally curing and cooling the fused layer and removing same from said thin metal mold” (Emphasis added.) (See Abstract). Thus, Chadwick, like JP 4-126222, teach an extra element of a reaction force provided by the first predetermined area in Chadwick.

JP- 4-126222.

Furthermore, Chadwick teaches away from vacuum molding, as Chadwick discloses that “[w]hile suitable for their intended purpose such methods are not useful in processes in which the cover is formed by casting an excess charge of thermoplastic resin on a heated thin metal shell mold to form a fused layer of the resin on the surface following which the excess amount of material is dumped from the heated thin metal shell mold leaving only the fused layer in place thereon.” (Emphasis added.) (Col. 1, lines 32-39.)

Moreover, Chadwick teaches extra steps and elements including not only a reaction force on the anvil to determine the depth of penetration of the embossment discussed above, but “[t]he required time to build up a desired thickness shell or cover is dependent upon the temperature of the mold, the size of the particles and the thickness requirements. Once the cover thickness is attained the shell mold 32 is emptied of excess material into a suitable receptacle such as a dump

103 REJECTIONS

Claims 13, 14, 17, 18, 28, 29, 30, 31, and 32 stand rejected under 35 U.S.C. §103(a) as being unpatentable over JP 4-1 26222 in view of JP 2000-272459. Applicants respectfully traverse.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Establishing a prima facie case of obviousness requires that all elements of the invention be disclosed in the prior art. *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970).

Further, even assuming that all elements of an invention are disclosed in the prior art, an Examiner cannot establish obviousness by locating references that describe various aspects of a patent applicant's invention without also providing evidence of the motivating force which would have impelled one skilled in the art to do what the patent applicant has done. *Ex parte Levengood*, 28 U.S.P.Q. 1300 (Bd. Pat. App. Int. 1993). The references, when viewed by themselves and not in retrospect, must suggest the invention. *In Re Skoll*, 187 U.S.P.Q. 481 (C.C.P.A. 1975).

The Examiner alleges that JP 4-126222 also teaches using a device that includes a vacuum-forming tool (figs 1-6); disposing the panel cover in a vacuum-forming tool (figs 1-6); and contacting the panel cover with the blade when the panel cover is deformable (figs 1 -6)--as a note, the skin material/panel cover of JP 4-1 26222 is heated thus making it deformable. The Examiner properly admits that JP 4-1 26222 does not teach the limitations of claim 13; using a female vacuum-forming tool; using a at least one scoring member disposed upon a cylinder which is actuated by an adjustment system; using an adjustment system that is pneumatic and is controlled by an operator; advancing a contact edge of the at least one scoring device into the inner surface of the panel cover a predetermined distance toward the outer surface, wherein the panel cover is disposed in a mold device; controlling the predetermined distance by limiting the advancement of the at least one scoring device into the panel cover; and using a scoring blade which forms a part of the a movable cylinder, the blade being extendable and retractable relative to the cylinder, the cylinder and blade being oriented above the body. However, the Examiner references JP 2000-272459 that allegedly teaches molding an airbag door in a panel cover by forming a score on the inner surface of the panel cover with a scoring member disposed on a cylinder which is actuated by a pneumatic adjustment system (figs 1-7); advancing a contact

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edge of the scoring device into the panel cover a predetermined distance toward the outer surface (figs 1-7); controlling the predetermined distance of the scoring device into the panel cover (figs 1-7); and using a scoring blade that forms a part of a movable cylinder (figs 1-7).

The Examiner concludes that JP 4-126222 and JP 2000-272459 are combinable because they are analogous with respect to forming scores on an inner surface of a panel cover in order to form an air bag door. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the scoring device of JP 4-126222 with the above teachings of JP 2000-272459 in order to limit exposure of the scoring blade to unintentional wear and tear by enabling the blade to be retracted while still scoring only the inner surface.

First it is respectfully pointed out that claims 13, 14, 17, 18, 28-32 depend from claim 12 which is submitted as being allowable for defining over JP 4-126222 as discussed above. Furthermore, it is respectfully noted that use of the teachings of JP 2000272459 does not cure the deficiencies noted above with respect to JP 4-126222.

Furthermore, it is respectfully submitted that JP2000272459 discloses a manufacturing method of an air bag storing body comprises thermally-softening a multi-layered body (i.e., layers 2, 3, 4) having a core layer 2 with at least a prescribed thickness and a surface layer 3 laminated on one surface side of the core layer 2, molding by pressing to the recessed surface 70 of a molding die consisting of a projected die 8 and recessed die 7, and forming the surface layer 3 to the outer periphery side contacting to the recessed die surface 70. The storing body has the recessed part for storing the air bag on the inner periphery side. At the molding time of the multi-layered body, a hole 3c is formed by penetrating the surface layer 3 by the boring member moving from the core layer 2 side to the surface layer 3 side, thereafter, the opening 30 of the hole 3c is closed by thermally fusing the surface contacting to the at least recessed surface 70 of the surface layer 3. (See Abstract and Figures 1-6). Thus, JP2000272459 discloses a boring member (i.e., drill 9a) contacting inner and outer surfaces of three layers from an inside surface layer 4, first, and extending through an exterior surface layer 3, last, before thermally fusing an exterior portion of surface layer 3 exposed to a vehicle occupant.

Neither JP 4-126222, nor JP2000272459, alone or in combination, teach or suggest forming the instrument panel cover having an inner surface and an opposing outer surface defining a single uniform layer using a female vacuum forming tool exposing the inner surface, elevating a temperature of the female vacuum forming tool high enough to form

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the outer surface against the female vacuum forming tool, and forming a deployment region in the inner surface of the instrument panel cover by contacting only the inner surface with at least one scoring device after initiation of the formation of the instrument panel cover creating at least one score therein at or near the elevated temperature from the female vacuum forming tool when said at least one scoring device contacts the instrument panel cover, but prior to the cooling thereof, the at least one score defining the deployment region and providing a weakened tear pattern in the inner surface so that deployment of an air bag cushion causes the deployment region to open along the at least one score for deployment of the air bag cushion, as in amended Claim 12 and similarly claimed in Claims 33 and 34. Accordingly, Claim 12, including claims depending therefrom, i.e., Claims 13 and 15-32, define over JP 4-126222 in view of JP2000272459.

In regard to using a female vacuum-forming tool, the Examiner suggests such is a mere obvious matter of choice dependent on mold equipment availability and of little patentable consequence to the claimed process since it is not a manipulative feature or step of the claimed process. It is respectfully submitted that the female vacuum-forming tool is positively claimed and has a manipulative feature of heating the instrument panel cover as claimed.

Claims 25, 27, 35, and 37 stand rejected under 35 U.S.C. §103(a) as being unpatentable over JP 4-126222. The applicants respectfully traverse.

It is respectfully pointed out that claims 25, and 27 depend from claim 12 while claims 37 and 37 depend from claim 34 which are submitted as being allowable for defining over JP 4-126222 as discussed above. Furthermore, it is respectfully noted that using a panel cover formed from the claimed materials; elevating the temperature of the panel cover to a temperature higher than the temperature of the formed panel cover and the panel is at or near the elevated temperature when the scoring device contacts the panel cover; forming the deployment region after vacuum-forming but prior to cooling; and forming the substrate by injection molding does not cure the deficiencies noted above with respect to JP 4-126222.

Claim 14 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Chadwick (USPN 5256354) as applied to claim 12 above and further in view of JP 4-151345. Claim 14 has

been canceled rendering any rejection thereto moot.

Claims 27, 31, and 32 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chadwick (USPN 5256354). Applicants respectfully traverse.

Claims 27, 31 and 32 depend from claim 12 which is submitted as being allowable for defining over Chadwick as discussed above. Furthermore, it is respectfully submitted that use of the mold limitations (recited in claims 27, 31, and 32) into the scoring device of Chadwick does not cure the deficiencies noted above with respect to Chadwick.

Claim 29 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chadwick (USPN 5256354) as applied to claim 28 above and further in view of JP 4-151345. Applicants respectfully traverse.

Claim 29 depends from claim 12 which is submitted as being allowable for defining over Chadwick as discussed above. Furthermore, it is respectfully submitted that use of the alleged teachings below of JP 4-151345 does not cure the deficiencies noted above with respect to Chadwick.

The Examiner correctly admits that Chadwick does not teach using a female vacuum-forming mold. However, the Examiner alleges that JP 4-151345 teaches forming an air bag door skin by vacuum-forming the skin material into a predetermined shape (abstract; figs 1-12); and forming the skin into a concaved shape (abstract; figs 1-12). JP 4-151345 also teaches the equivalence of vacuum-forming and powder slush molding to shape the skin (abstract).

The Examiner concludes that Chadwick and JP 4-151345 are combinable because they are analogous with respect to forming an air bag door, and thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to vacuum form the panel cover of Chadwick as taught by JP 4-151345 instead of powder slush molding since vacuum-forming and powder slush molding are equivalents.

It is respectfully submitted that JP 4-151345 more accurately discloses a vinyl chloride resin or the like formed to the predetermined shape through a vacuum forming process, a powder slush molding process or the like, is so placed on the surface of a support seat 22 as to keep the reverse side thereof up. Then, a heated cutter 24 is lowered together with a heater body 28 and presses the predetermined portion of a divisional line on the reverse side of the

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sheet skin material 20. As a result, plastic material 20 swells at both sides of the groove 36, due to the pressure of the heated cutter 24, and a bank portion 38 is formed. (See Constitution and FIGS 1-3). More specifically, as best understood, JP 4-151345 teaches a "formed" instrument panel cover, formed by vacuum forming process, powder slush process, or the like. Then the "formed" cover is "placed" on a support seat 22 to maintain exposure of the reverse side. Then a "heated cover" is lowered to form a divisional line. JP 4-151345 teaches away from simultaneously forming divisional line during formation of the instrument panel cover. In addition, JP 4-151345 does not teach or suggest, and in fact teaches away from, forming the divisional line prior to cooling of the formed predetermined shape. Lastly, unlike the other references, JP 4-151345 discloses forming a "bank portion 38" when the heated cutter 24 is lowered into the reverse side, thus forming thicker portions and a thinned portion therebetween, not just a thinned out portion.

Accordingly, JP 4-151345 teaches separate processing of the cover and then later forming the divisional line whether the cover is vacuum formed or slush powder processed, thus teaching away from applicants' invention. JP 4-151345 teaches away from forming the divisional line when the instrument panel is disposed with a female vacuum forming tool for simultaneous processing as claimed.

Claim 33 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Chadwick (USPN 5256354) in view of JP 4-151345. Claim 33 has been canceled rendering any rejection thereto moot.

Claims 34-38 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chadwick (USPN 5256354) in view of JP 4-151345. Applicants respectfully traverse.

Claims 35-38 depend from claim 34 which is submitted as being allowable for defining over Chadwick as discussed above. Furthermore, it is respectfully noted that use of the teachings of JP 4-151345 do not cure the deficiencies noted above with respect to Chadwick.

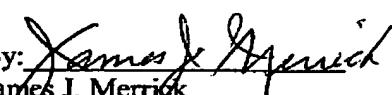
Moreover, JP 4-151345 teaches separate processing of the cover and then later forming the divisional line whether the cover is vacuum formed or slush powder processed, thus teaching away from applicants' invention. JP 4-151345 teaches away from forming the divisional line when the instrument panel is disposed with a female vacuum forming tool for simultaneous

processing as claimed.

In view of the above, it is respectfully submitted that the instant application is in a condition for allowance. Such action is most earnestly solicited. If for any reason the Examiner feels that consultation with Applicant's attorney would be helpful in the advancement of the prosecution, he is invited to call the telephone number below for an interview.

If there are any charges due with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

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